

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I



SEMS DocID 621086

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)
DATA INPUT FORMS FOR SUMMARY MODEL

Facility Name: Fiber Materials Incorporated

EPA ID#: ME0 0482 68890

Address: 5 Main Street Biddleford Industrial Park
Biddleford, Maine

Facility Contact: David Loper Title: Operation Manager
Phone: (207) 282-5911

This form is to be used to provide information to the Summary Model. The information should be provided in the form of a written report or a computer printout. The information should be provided in the form of a written report or a computer printout. The information should be provided in the form of a written report or a computer printout.

Analyst Name: David P. Brouillet Title: Civil Engineer

Organization: TRCC

Phone: (508) 970-5600 Date: July 10, 1992

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F. KENNEDY FEDERAL BUILDING, BOSTON, MA 02203-2211

MEMORANDUM

DATE: November 3, 1992

SUBJ: Final NCAPS Input Forms for Fiber Materials of Biddeford, ME

FROM: Richard Piligian

TO: Ernest Waterman

The following are comments on the final NCAPS portion of the PA+ Report.

- 1) On worksheet #1, both units #1 and #3 have no condition of containment for the ground water route. Unit #7 should have a condition of containment of "poor" rather than "good" since there were releases from this unit (GW route sheet, first page).
- 2) On worksheet #2, Unit #5 has furfuryl checked off as the unit contents instead of argon.
- 3) On the ground water route score sheet, second page, containment is marked "fair" when it should be "poor" per worksheet #1.
- 4) On the surface water route score sheet, third page, containment is marked "fair" when it should be "poor" per worksheet #1.
- 5) On the air route score sheet, second page, containment is marked "very good" when it should be "good" per worksheet #1.

INSTRUCTIONS

The Data Input Forms for the Summary Model have been developed to aid in the collection of specific data during assessment of RCRA regulated facilities. The data will be used to better meet national RCRA program reporting needs developed for treatment and storage facilities but may also be applied to disposal facilities.

The following pages are organized into four migration pathways, including Groundwater, Surface Water, Air, and On-Site. Each pathway has instructions on the left-hand side, and data sheets on the right. In addition to filling in the appropriate blanks and/or checking the appropriate boxes on the data sheets, please provide an indication of your confidence in those data by checking the appropriate box in the right margin, based on the following scale:

- | | |
|------------------|--|
| Estimated | The information known about the facility only allows an estimated answer (please comment to indicate source and rationale for estimate). |
| Confirmed | Information was found in the referenced document to support the answer, or a site visit confirmed the information. |

Check the appropriate box as best as you can. This will provide a future analyst an indication of the data quality in order to determine if additional study is required. However, these data are being used to derive numerical scores, so be as precise as possible, and make use of the spaces provided for any comments.

Comments to support data are needed and should be added on the data and comment sheets. On the instruction sheets, for example where potential "sources" are indicated, simply circle the source(s) that provided the information (see Appendix C for a description of suggested sources). *In all cases*, please provide the name and date of the document or the number of the reference on the comment line provided so that the source can be located in the future, if necessary. A blank has been provided to list actual references reviewed. Refer to Appendix A for waste characteristic information for specific chemicals, Appendix B for net precipitation, and Appendix D for 1-year 24-hour rainfall data for New England States.

In many cases, the data requested are the same or similar to the data used in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Preliminary Assessment Method scoresheets. In these cases, an asterisk (*) has been placed in the instructions with the item number to assist the analyst in the event both sets of forms are being completed at the same time.

Worksheets numbered 1 - 5 have been provided to aid the analyst in reviewing and evaluating the site (see forms and Appendix E). Use Worksheets numbered 1 and 2 to identify each hazardous waste management unit, its condition of containment, and its associated chemicals of concern. Use Worksheets numbered 3, 4, and 5 to determine the site's most toxic and persistent chemical for each route.

REFERENCES

Please provide the name and date (and pages, if appropriate) of each document used to complete this booklet.

No. Reference

- 1 TRCS, on-site reconnaissance^{work} conducted June 11, 1982
- 2 USGS, 1985 Hydrologic Data for Significant Sand and Gravel
Aggregates, U.S. Geological Survey, 1985
- 3 Maine DEP, Administrative Consent Agreement December 3, 1980
- 4 U.S. EPA, Hazardous Waste Permit Application, Sept. 1990
- 5 Flood Insurance Map. FEMA, City of Bouldering, MA, 1984
- 6 Maine DEP A-1 Permit License 1990
- 7 USGI, National Wetlands Inventory, U.S. Dept. of Interior
1985
- 8 _____
- 9 _____
- 10 _____
- 11 _____
- 12 _____
- 13 _____
- 14 _____
- 15 _____

WORKSHEET #1
Facility Unit Identification

List each specific unit at the site, its size, and condition of containment. Use this worksheet to identify the site's specific units and to select the worst containment level for each unit and for each pathway. Within the selected condition of containment, assign GW for the groundwater route, SW for the surface water route, AR for the air route, and OS for the on-site route. The worst conditions will be entered on the data sheets for each route.

Area or Unit #	Area or Unit Name & Description	Size	Condition of Containment				Ref #
			Very Good	Good	Fair	Poor	
1	#1 Hazardous Materials Storage	600 ft ²	OS				1
2	Building #3	20,000 ft ²		AR		SW OS	1
3	#2 Hazardous Materials Storage	300 ft ²		OS			1
4	Work Area #2			AR OS			1
5	Argon Storage Area	15,000 gal.		AR SW			1
6	Flex-Frem Area			SW-GW OS			1
7	Underground Storage Tanks	1,000 to 4,000 gal		GW			1
8							
9							
10							
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12							
13							
14							
15							

4 ☐ check here if additional sheets are attached

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WORKSHEET #2
Unit Contents

Use this worksheet to check off the specific chemicals found at each unit. Refer to areas or units by number based on Worksheet #1. If specific chemicals have not been identified, use chemical groups.

Chemical Name or Waste Type	Area or Unit #														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sulfuric acid	X		X												
X-ray process mixture	X														
waste scrubber and trap residue	X		X	X											
phenyle resin	X		X	X											
Carbon pitch	X		X	X		X									
Coal tar pitch	X		X	X											
furfural	X		X												
PCB capacitors	X	X													
Oxide	X		X												
Acetone	X		X												
nitrogen	X		X												
nitrite		X	X												
molybdenum		X													
toluene	X		X	X		X									
isobutyl	X		X	X	X										
Argon															
Sludge															
Oil Waste							X								
Solvents	X		X	X											
Pesticides															
Other Organic Chemicals															
Inorganic Chemicals															
Acids															
Bases															
Heavy Metals															

GROUNDWATER ROUTE
Instructions & Sources
First Page

A. Observed Release

***1. Is There an Observed Release?**

Yes, if there is documented groundwater contamination above background levels or above the drinking water maximum contaminant level (MCL); or No, if there is no documentation or indication of a release; Possible, if groundwater quality data or the site visit lead you to believe a release to the groundwater may have taken place (e.g., unlined lagoon, spill residue on ground, underground storage tank with no groundwater monitoring system, or subsurface/surface soil contamination). Documentation may include analytical evidence, or a report by a regulatory agency or by a facility employee stating that a release has occurred.

Sources (circle): Monitoring Reports; Site Visit; 3007 Response; Water Compliance Monitoring Files; Site Inspections; Spill Reports.

Comment and other source (date): Ref # 2

B. Route Characteristics

***1. Depth to Aquifer**

Enter the depth from ground surface to the aquifer beneath the site (in feet).

Sources (circle): Monitoring Reports; Inspection Reports; Part B.

Comment and other source (date): Ref # 2

2. Net Precipitation

Subtract mean annual lake evaporation from the normal annual total precipitation in order to obtain the average net precipitation for the area.

Sources (circle): See Appendix B.

Comment and other source (date): 22

3. Physical State

Evaluate the physical state of the waste most likely to impact the groundwater in the event of a release. Consider the volume, condition and content and select the least stable physical state of the wastes on site:

stable solid
unstable solid
powder, ash
liquid, gas, sludge

Sources (circle): Site Visit; Inspection Reports; Part A.

Comment and other source (date): _____

GROUNDWATER ROUTE
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First Page

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A. Observed Releases

1 Is there an observed release? (circle one):

☒ ☐

Yes

No

Possible

Comments:

Two underground storage tanks were removed
and there was no groundwater monitoring as
a part of their removal.

B. Route Characteristics

1. Depth to Aquifer (feet): 0.0

☒ ☐

2. Net Precipitation (inches): 22

☒ ☐

3. Physical State (check one):

☒ ☐

- ☐ Stable Solid (most stable)
☐ Unstable Solid
☐ Powder, Ash
☒ Liquid, Gas, Sludge (least stable)

Comments:

Most of the materials used in FMI processes
are solvents and pitches and resins

GROUNDWATER ROUTE
Instructions & Sources
Second Page

C. Containment

- *1. Containment is a measure of the physical barriers in place to inhibit a waste from entering the groundwater pathway either now or in the past. Do not consider natural barriers (e.g., an underlying clay layer) when evaluating containment criteria. If there are multiple SWMUs, select the SWMU with the worst containment level. Interpret the descriptions in site reports or similar documents, using the following criteria as guidelines:

<u>Unit</u>	<u>Migration/Potential</u>	<u>Score</u>
Sealed Container/Tank	Sound Secondary Containment	Very Good
Sealed Container/Tank	Unsound Secondary Containment	Good
Leaky Container/Tank	Sound Secondary Containment	Good
Underground Storage Tank	Tank Integrity Unknown	Good
Sealed Container/Tank	No Secondary Containment	Fair
Leaky Container/Tank	Unsound Secondary Containment	Fair
Leaky Container/Tank	No Secondary Containment	Poor
Land-based Unit		Poor

Unit scored (include description and dates in use); use *Worksheet #1*:

Unit #2 closed looped cooling tower located near building #3
1975 / present

Sources (circle): Inspection Reports; Water Compliance Reports; Site Visit; 3007 Response.
 Comment and other source (date): Ref #3

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C. Containment (check one):

- ☐ Very Good
☐ Good
☒ Fair
☐ Poor

Comments:

Phenol contaminated water leaked from process tanks onto the floor in Building 3. FMI did not hold a waste Discharge license

and in December 1989 the northernmost cooling tower had a pipe that burst spilling Thorogard (a biocide) treated water onto the ground near Building 3.

GROUNDWATER ROUTE
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D. Waste Characteristics

1. Chemical Name and/or RCRA Waste Code Number

Enter the one chemical or waste code of most concern (for the groundwater route) as defined by the chemical with the highest Sax toxicity rating, as found in Appendix A. Use *Worksheet #3* to determine toxicity/persistence for each chemical of concern for the groundwater route (included in Worksheet #2). Do not consider concentrations of contaminants.

Sources (circle): For determining contaminants of concern: Site Visit, Groundwater Analytical Data. For determining most toxic compound: See Appendix A.
Comment and other source (date): Ref # 4 1980

2. Toxicity/Persistence

Value for the chemical or waste of concern. This contaminant should be at a SWMU that has a containment score less than "VERY GOOD". Refer to *Worksheet #3*.

Sources (circle): See Appendix A.

Comment and other source (date): _____

WORKSHEET #3

Chemical Toxicity/Persistence Values for Groundwater and Surface Water Routes

Identify and list each chemical at the site which has the potential to migrate to the groundwater or surface water routes. List the RCRA waste code and CAS number, if known. Obtain toxicity/persistence values from Appendix A for each chemical. Use the worksheet to select the chemical with the highest toxicity/persistence value (0-18) and enter its name and value in the Waste Characteristics section for the groundwater and surface water routes. Note in comments if toxicity/persistence information was not available.

CAS #	Chemical Name and/or Waste Code	toxicity/persistence 0-18	GW or SW
	F003	6	GW
	F005	9	GW
	P001	9	GW
	AP002	9	GW
	TK00	18	GW

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D. Waste Characteristics

1. Chemical Name and/or RCRA Waste Code Number:

☒ ☐

D006

2. Toxicity/Persistence Value (circle one):

☒ ☐

0 3 6 9 12 15

18

Comments:

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***3. Waste Quantity**

Report wastes for units only if containment is other than "VERY GOOD." If Containment is "VERY GOOD" for all units, waste quantity equals zero.

If quantity is known, convert data to a common unit: assume 1 ton = 1 cubic yard = 4 drums. For the purpose of converting bulk storage, assume 1 drum = 50 gallons. Enter waste quantity in cubic yards, tons or drums.

If quantity is unknown, estimate waste quantity using the following criteria:

< 10 yd ³ (or < 40 drums)	small
100 - 1,000 yd ³ (or 400 - 4,000 drums)	large
> 1,000 yd ³ (or > 4,000 drums)	large storage or disposal areas

If the site has multiple SWMUs, combine all waste quantities for SWMUs capable of migrating to groundwater (containment scores less than "VERY GOOD"). Use *Worksheet #1* to assist in combining waste quantities.

Sources (circle): Part A; Tank Capacities; Permitted Drum Storage Capacity; Inspection Reports; 3007 Response; Annual Reports; Part B.
Comment and other source (date): Ref #4

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3. Quantity Known (circle one)?

Yes No

If Yes, enter actual amount:

100 cubic yards or tons
drums

If No, check one:

- ☐ Is amount likely to be small?
☐ Is amount likely to be large?
☐ Are large storage or disposal areas present?

Comments:

According to Hazardous waste Permit Application
FMI reports 200,000 pounds of D006
As the estimated cancel quantity of
waste.

GROUNDWATER ROUTE
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E. Targets

***1 Groundwater Use**

Options are given in order from the most critical (Drinking Water) to the least critical (Not Impacted). Check the most critical groundwater use that occurs within 3 miles of the site. "Drinking Water" indicates that the groundwater was previously used, is presently used, or is likely to be used in the future for drinking water. If drinking water use is not documented, check Possible Drinking Water, unless specific information refutes this possibility (for example, industrial use of unusable aquifer due to low yield).

If you can verify that none of these uses apply, then check:

Quality Impacted, if there is an observed release.

Quality Not Impacted, if there is no observed release.

Source (circle): Monitoring Report, GIS, Local Water Department.

Comment and other source (date): Ref #1

***2. Distance to Intake**

Distance (in miles) to the nearest drinking water well within 3 miles of the facility. If unknown, use distance between hazardous substance and nearest residence where groundwater may be used for drinking water. If the use of the groundwater is unknown ("Possible Drinking Water"), "Quality Impacted," or "Quality Not Impacted," assign "2 to 3 miles" for the distance. If the groundwater flow direction is known, do not consider upgradient wells as receptors.

Source (circle): GIS; USGS Topographic Map or Site Map, Site Visit; Part A; State Atlas.

Comment and other source (date): _____

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E. Targets

1. Groundwater Use (check only *one*):

- ☒ Drinking Water
☐ Possible Drinking Water
☐ Agriculture or Industrial

- ☐ Quality Impacted
☐ Quality Not Impacted

2. Distance to intake (to the nearest 1/2 mile): 0.0

☒ ☐

Comments:

*A well is located on a residential property
located adjacent to the site.*

SURFACE WATER ROUTE
Instructions & Sources
First Page

The surface water pathway is assessed to determine whether contaminated runoff has reached surface water or if site characteristics make a release to surface water likely.

A. Observed Release

- *1. Yes, if there is a evidence of a direct discharge of contaminants to surface water; No, otherwise. A direct discharge can include such events as spills, runoff from contaminated soils, or discharge of contaminated groundwater. Documentation may include analytical evidence, a report by a regulatory agency or by a facility employee stating that a release has occurred.

Sources (circle): Site Visit; Monitoring Reports; 3007 Response.
Comment and other source (date): Ref # 3

B. Likelihood of Release

1a. Permitted Outfall

Yes, if there is a permitted outfall; No, if there is not.

Sources (circle): Department of Environmental Protection; EPA Files
Comment and other source (date): Ref # 3

1b. Violations

Yes, if there have been permit violations; No, if there have not.

Sources (circle): Department of Environmental Protection; EPA Files
Comment and other source (date): Ref # 3

***2. Facility Location**

Select flood prone area, 100-year floodplain, or other. If floodplain information is unavailable, check "Other."

Sources (circle): Flood Insurance Study Maps
Comment and other source (date): Ref # 5 1984

SURFACE WATER ROUTE
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A. Is there an observed release? (circle one)

Yes

No

Comments:

A discharge of phenol contaminated water leak
from process tanks onto the floor in
Building #3.

B. Likelihood of Release

1a. Is there a permitted outfall?
(circle one)

☒ ☐

Yes

No

1b. If so, have there been permit violations?
(circle one)

☒ ☐

Yes

No

2. Facility Location (check one):

☒ ☐

- ☐ Flood prone area
☐ 100-year flood plain
☒ Other

Comments:

The site is located in Zone C which is
an area with a low possibility of flooding.

SURFACE WATER ROUTE
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C. Route Characteristics

1. 24-hour Rainfall

Enter the 1-year, 24-hour rainfall. Refer to contour maps in Appendix D.

Sources (circle): See Appendix B
Comment and other source (date): _____

***2. Distance to Surface Water**

Enter distance in miles. If surface water is discharged to a stream or river through a ditch, then, if the ditch always has water in it, use the distance to the ditch; if water in the ditch is intermittent, use the distance to the stream or river.

Sources (circle): USGS; Site Visit; GIS.
Comment and other source (date): _____

3. Physical State

Evaluate the physical state of the waste most likely to impact surface water in the event of a release. If there are multiple SWMUs, select the least stable physical state of the wastes on site:

stable solid
unstable solid
powder ash
liquid, gas, sludge

Sources (circle): 3007 Response; Site Visit.
Comment and other source (date): _____

Ref #3

SURFACE WATER ROUTE
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C. Route Characteristics

1. 24-hour Rainfall (inches): 2.5 ☒ ☐
2. Distance to Surface Water (miles): 0.125 ☐ ☒
3. Physical State (check one):
 - ☐ Stable Solid (most stable)
 - ☐ Unstable Solid
 - ☐ Powder, Ash
 - ☒ Liquid, Gas, Sludge (least stable)

Comments:

A discharge of phenol contaminated water leak from process tanks onto the floor in Building 3, All floor drains were tied in with the surface drainage network which dumps in to an unnamed brook.

SURFACE WATER ROUTE
Instructions & Sources
Third Page

***4. Containment**

Containment is a measure of the physical barriers in place to inhibit a waste from entering the surface water pathway. If there are multiple SWMUs, select the SWMU with the worst containment level.

Use the following criteria as guidelines (e.g., consider a lined lagoon with unbreached berms as a "sealed container"):

<u>Unit</u>	<u>Containment/Migration Potential</u>	<u>Score</u>
Sealed Container/Tank	Sound Secondary Containment	Very Good
Sealed Container/Tank	Unsound Secondary Containment	Good
Leaky Container/Tank	Sound Secondary Containment	Good
Underground Storage Tank	Tank Integrity Unknown	Good
Sealed Container/Tank	No Secondary Containment	Fair
Leaky Container/Tank	Unsound Secondary Containment	Fair
Leaky Container/Tank	No Secondary Containment	Poor
Land-based Unit		Poor
Contaminated Groundwater	Discharge to Surface Water	Poor
Contaminated Surface Soil	Runoff to Surface Water Likely	Poor

Unit scored (include description and dates in use); use *Worksheet #1*:

Unit #2

Sources (circle): Inspection Reports; 3007 Response; Site Visit.

Comment and other source (date):

Ref #3

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4. Containment (check one):

- ☐ Very Good
☐ Good
☒ Fair
☐ Poor

Comments:

The closed-looped cooling tower at the
time of documented discharges need re
secondary containment.

SURFACE WATER ROUTE
Instructions & Sources
Fourth Page

D. Waste Characteristics

1. Chemical Name and/or RCRA Waste Code Number

Enter the one chemical or waste code of most concern (for the surface water route) as defined by the chemical with the highest Sax toxicity rating, as found in Appendix A. Use *Worksheet #3* (on page 10 in groundwater section) to determine toxicity/persistence for each chemical of concern for the surface water route (included in *Worksheet #2*).

Sources (circle): For determining contaminants of concern: Site Visit, Surface Water/Sediment Analytical Data. For determining most toxic compound: See Appendix A.
Comment and other source (date): Ref # 9 1980

2. Toxicity/Persistence

Value for the chemical or waste of concern. Refer to *Worksheet #3*.

Sources (circle): See Appendix A.
Comment and other source (date): _____

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D. Waste Characteristics

1. Chemical Name and/or RCRA Waste Code Number:

☒ ☐

P006

2. Toxicity/Persistence Value (circle one):

☒ ☐

0 3 6 9 12 15 18

Comments:

SURFACE WATER ROUTE
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***3. Waste Quantity**

Report units only if containment is other than "Very Good." If Containment is "VERY GOOD" for all units, waste quantity equals zero.

if quantity is known, convert data to a common unit, assume 1 ton = 1 cubic yard = 4 drums. For the purpose of converting bulk storage, assume 1 drum = 50 gallons. Enter waste quantity in cubic yards, tons or drums.

If quantity is unknown, estimate waste quantity using the following criteria:

< 10 yd ³ (or < 40 drums)	small
100 - 1,000 yd ³ (or 400 - 4,000 drums)	large
100 - 1,000 yd ³ (or > 4,000 drums)	large storage or disposal areas

If the site has multiple SWMUs, use combined waste quantities. Use *Worksheet #1* to assist in combining waste quantities. Generally, amount would be small for only contaminated groundwater discharging to surface water or if there is just a likelihood that contaminated soil is likely to reach surface water through surface runoff.

Sources (circle): Part A, Inspection Reports; 3007 Response; Annual Reports; Part B.
Comment and other source (date): Ref # 4

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3. Waste Quantity Known? (circle one)

Yes

No

If Yes, enter amount:

1,00 cubic yards or tons
 drums

If No, check one:

- ☐ Is amount likely to be small?
☐ Is amount likely to be large?
☐ Are large storage or disposal areas present?

Comments:

According to Hazardous Waste Permit
Application Form reports 200,000
pounds of D006 as the estimated
quantity of waste.

SURFACE WATER ROUTE
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E. Targets

*1. Type of Surface Water Use

Options are given in order from most critical (Drinking Water) to least critical. Check the most critical that applies. Check "Drinking Water" if surface water was previously used, is presently used, or is likely to be used in the future as drinking water. If drinking water use is not documented, check "Possible Drinking Water", unless specific information refutes this possibility.

If there is no information regarding the use of a river or stream, assume recreational use. Often, close recreational use is more likely to have an impact than a drinking water intake. If you can verify that none of the uses apply, then check:

Quality Impacted, if there is an observed release.
Quality Not Impacted, if there is no observed release.

Further distinguish depending on whether the distance to surface water is < 3 miles.

Sources (circle): GIS, Site Visit, Local Water Department.
Comment and other source (date): _____

*2. Distance to Intake or Contact Point

Distance from site to the point of surface water use (drinking water intake, recreation area, etc.). If there is no information on the use of a surface water body receiving a discharge from the facility, the distance to the contact point should be the distance from the facility to the nearest point of the surface water body. If discharge is through a ditch, use the distance to the stream, river, or water body, not the distance to the ditch.

Sources (circle): Hydrographic Atlas; GIS; Site Visit; Town Records.
Comment and other source (date): Ref #1 Ref #2

*3. Distance to Sensitive Environment

Enter the distance from the site to a sensitive environment along the surface water route. Sensitive environments include freshwater wetlands (greater than 2 acres), marshes, swamps, parks (national or state), and critical habitats of state and federal proposed and listed endangered species.

Sources (circle): GIS; State Department of Fisheries & Wildlife; USGS
Comment and other source (date): _____

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E. Targets

1. Type of Surface Water Use (check one):

☒ ☐

- ☐ Drinking Water
- ☐ Possible Drinking Water
- ☒ Recreation
- ☐ Agricultural or Industrial
- ☐ Quality Impacted
- ☐ Quality not Impacted (but within 3 miles)
- ☐ No Surface Water Bodies (within 3 miles)

2. Distance to the Intake or Contact Point (miles): 1.25

☒ ☐

3. Distance to Sensitive Environment (miles): 0.03

☒ ☐

Comments:

AIR ROUTE
Instructions & Sources
First Page

For the air pathway, site characteristics are considered to address the potential for release even if no release has been documented. But the air pathway differs somewhat from the groundwater and surface water routes in assessing containment. In the case of air releases, *current* conditions must be used in completing these forms to assess the likelihood of releases.

A. Observed Release

***1. Is there an observed, unpermitted, ongoing release?**

Yes, if there is a documented, unpermitted, ongoing release to the air route from a SWMU; or No, if there is not a documented release. Documentation may include analytical evidence, a report by a regulatory agency or by a facility employee stating that a release has occurred, or by indirect evidence. Do not score an observed release based on an isolated explosion or fire, but event should be noted in comments.

Sources (circle): Monitoring Reports; Inspection Reports; Site Visit; 3007 Response;
TRI Department of Environmental Protection
Comment and other source (date): _____

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A. Observed Release

1. Is there an observed, unpermitted, ongoing release?
(circle one)

Yes

No

Comments:

☒ ☐

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B. Likelihood of Release

- *1. Does the facility have an operating air permit?

Yes, if the facility has an operating permit; or No, if it does not.

Sources (circle): EPA; Department of Environmental Protection.

Comment and other source (date): _____

- *2. Have there been any permit violations or odor complaints by residents?

Yes, if there have been permit violations or odor complaints; or No, if there have not.

Sources (circle): Department of Air Quality Control; EPA.

Comment and other source (date): Ref # 5

3. Can contaminants migrate into air?

Yes, if contaminant migration to air is possible; or No, if contaminant migration to air is not possible. See *Worksheet #4* for determining contaminants of concern for the air pathway.

Sources (circle): EPA; Versar document.

Comment and other source (date): Ref # 6

- *4. Containment (circle one):

Containment is a measure of the physical barriers in place to inhibit a waste from entering the air pathway. Interpret the descriptions in site reports or similar documents, using the following criteria as guidelines (for CURRENT conditions):

<u>Unit</u>	<u>Containment/Migration Potential</u>	<u>Score</u>
Closed Container/Tank	Inside Building	Very Good
Land-based Unit	Covered	Very Good
Storage Tank	Underground	Very Good
Closed Container/Tank	Open Area	Good
Open Container/Tank	Inside Building	Fair
Open Storage Tank	Underground	Fair
Open Container/Tank	Open Area	Poor
Land-based Unit	Open	Poor
Contaminated Surface Soil		Poor

If there are open drums, consider the entire set of drums in the storage area as open when scoring the containment. Outdoor wastewater treatment plant units are considered poor.

Unit scored (include description and dates in use); use *Worksheet #1*:

Unit # 7

Sources (circle): Site Visit, 3007 Response; Inspection Reports.

Comment and other source (date): _____

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B. Likelihood of Release

1. Does the facility have an operating air permit?
(circle one)

Yes

No

☒ ☐

2. Have there been any permit violations or odor complaints by residents?
(circle one)

Yes

No

☒ ☐

3. Can contaminants migrate into air?
(circle one)

Yes

No

☒ ☐

4. Containment (circle one):

☒ Very Good

☐ Good

☐ Fair

☐ Poor

☒ ☐

Comments:

AIR ROUTE
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C. Waste Characteristics

1. Chemical Name and/or RCA Waste Code Number

Enter the one chemical or waste code of most concern (for the air route) as defined by the chemical with the highest Sax toxicity rating, as found in Appendix A. Use *Worksheet #4* to determine toxicity for each chemical of concern for the air route (included in *Worksheet #2*).

Sources (circle): For determining contaminants of concern: Site Visit, Soil Analytical Data; Permits. For determining most toxic compound: See Appendix A.
Comment and other source (date): _____

2. Toxicity

Value for the chemical or waste of concern. Refer to *Worksheet #4*.

Sources (circle): See Appendix A.
Comment and other source (date): _____

WORKSHEET #4
Chemical Toxicity Values for Air Route

Identify and list each chemical at the site which has the potential to migrate to the air route. List the RCRA waste code and CAS number, if known. Obtain toxicity values from Appendix A for each chemical. Use the worksheet to select the chemical with the highest toxicity value (0-3) and enter its name and value in the Waste Characteristics section for the air route.

CAS #	Chemical Name and/or Waste Code	toxicity 0-3
	Ammonia (NH ₃)	3
	hydrogen cyanide	

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C. Waste Characteristics

1. Chemical Name and/or RCRA Waste Code Number

AMMONIA

2. Toxicity Value (circle one)

0 1 2 3

☒ ☐

Comments:

FMI operates scrubbers with a
NaOH solution that maintains 99%
collection efficiency on HCN and
NH₃.

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***3. Waste Quantity**

The air route should be completed using *current* waste quantities and *current* containment conditions.

Report wastes only if Containment is other than "VERY GOOD." If Containment is "VERY GOOD" for all units, waste quantity equals zero.

If quantity is known, convert data to a common unit, assume 1 ton = 1 cubic yard = 4 drums. For the purpose of converting bulk storage, assume 1 drum = 50 gallons. Enter quantity in cubic yards, tons, or drums.

If quantity is unknown, estimate waste quantity using the following criteria:

< 10 yd ³ (or < 40 drums)	small
100 - 1,000 yd ³ (or 400 - 4,000 drums)	large
> 1,000 yd ³ (or > 4,000 drums)	large storage or disposal areas

If the site has multiple solid waste management units (SWMUs), use combined waste quantities. Use the amount of volatiles and particulates with containment values less than "VERY GOOD" to determine waste quantity for the air route. If the facility discharges to air, include the amount of waste released in determining waste quantity.

Sources (circle): Part A; Inspection Reports; 3007 Response
Comment and other source (date): Ref #6

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3. Waste Quantity Known? (circle one)

Yes

No

If YES, enter actual amount:

0 cubic yards or tons
 drums

If No, check one:

- ☐ Is amount likely to be small?
☐ Is amount likely to be large?
☐ Are large storage or disposal areas present?

Comments:

Containment is very good therefore
the actual amount defaults to
zero

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D. Targets

***1. Population**

Determine if residences, industries, and agriculture are located within 4 miles of the site. Residence indicates a single person or more. Check most critical item which applies.

Sources (circle): GIS; Site Visit; Local Planning Department.

Comment and other source (date): Ref #1

***2. Distance to Sensitive Environments?**

Enter the nearest distance from the site to a sensitive environment in miles.
Sensitive environment includes freshwater wetlands (greater than 2 acres), marshes, swamps, parks (national or state), and critical habitats of state and federal proposed and listed endangered species.

Sources (circle): GIS; State Department of Fisheries & Wildlife; USGS.

Comment and other source (date): Ref #7

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D. Targets

1. Population (check one only)

☒ ☐

- ☒ Are residences located within 4 miles (most critical)?
☐ Are other industries located within 4 miles?
☐ Are agricultural lands located within 4 miles (least critical)?
☐ Any other situation? Please comment:

2. Distance to Sensitive Environments (miles) .02

☒ ☐

Comments:

ON-SITE ROUTE
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The on-site exposure pathway assesses the potential that people or sensitive environments will have direct physical contact with hazardous constituents or contaminated soil.

A. Access to Site

1. Is the site accessible to nearby residents?

Rate the accessibility as follows:

A 24-hour surveillance system or a barrier (fence, etc.) is in place with a means to control entry:

Score

Inaccessible

A less than 24-hour security guard but no barrier; OR
a barrier but no separate means to control entry; OR
a fence that is partially open:

Limited Access

No barrier and no security guard:

Unlimited Access

Sources (circle): Site Visit Facility Inquiry.
Comment and other source (date): _____

Ref #1

B. Observed Soil Contamination

- *1. Is there observed soil contamination?

Yes, if there is sampling information showing concentrations of contaminants greater than background; or No, if there is not a documented release to soil. If indirect evidence such as stressed vegetation, indicates a release, estimate Yes and comment. Do not score an observed release if contaminated soil is covered by 2 feet or more of clean soil or is covered by concrete or asphalt.

Sources (circle): Monitoring Reports; Site Visit; 3007 Response.
Comment and other source (date): _____

Ref #3

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A. Access to site

1. Rate the accessibility of the site (check one):

☒ ☐

- ☒ Inaccessible
☐ Limited access
☐ Unlimited access

Comments:

B. Observed Soil Contamination

1. Is there observed soil contamination? (circle one):

☒ ☐

Yes

No

Comments:

There has been a release of Thoroguard
from closed-recip cooling towers which
came in contact with soils on site.

ON-SITE ROUTE
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C. Containment

1. Containment is a measure of the physical barriers in place to inhibit a waste from entering the on-site pathway either now or in the past. Use the same containment factor selected in the Groundwater Route section:

<u>Unit</u>	<u>Containment/Migration Potential</u>	<u>Score</u>
Sealed Container/Tank	Sound Secondary Containment	Very Good
Sealed Container/Tank	Unsound Secondary Containment	Good
Leaky Container/Tank	Sound Secondary Containment	Good
Underground Storage Tank	Tank Integrity Unknown	Good
Sealed Container/Tank	No Secondary Containment	<u>Fair</u>
Leaky Container/Tank	Unsound Secondary Containment	Fair
Leaky Container/Tank	No Secondary Containment	Poor
Land-based Unit		Poor

Unit scored (include description and dates in use); use *Worksheet #1*:

Unit #2

Sources (circle): Investigation Reports; Site Visit; 3007 Response.

Comment and other source (date): Unit #1

ON-SITE ROUTE
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C. Containment:

1. Containment score (check one):

- ☐ Very Good
☐ Good
☒ Fair
☐ Poor

☒ ☐

Comments:

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D. Waste Characteristics

1. Chemical Name and/or Waste Code Number

Enter the one chemical or waste code of most concern (for the on-site route) as defined by the chemical with the highest Sax toxicity rating, as found in Appendix A. Use *Worksheet #5* to determine toxicity for each chemical for the on-site route (included in *Worksheet #2*).

Sources (circle): For determining contaminants of concern: Part A: Site Visit; Soil Analytical Data. For determining most toxic compound: See Appendix A.
Comment and other source (date): ACT #3

2. Toxicity

Value for the chemical or waste of concern. Refer to *Worksheet #5*.

Sources (circle): See Appendix A.
Comment and other source (date): _____

WORKSHEET #5
Chemical Toxicity Value for On-Site Route

Identify and list each chemical at the site which has the potential to migrate to the on-site route. List the RCRA waste code and CAS number, if known. Obtain toxicity values from Appendix A for each chemical. Use the worksheet to select the chemical with the highest toxicity value (0-3) and enter its name and value in the Waste Characteristics section for the on-site route.

CAS #	Chemical Name and/or Waste Code	toxicity 0-3
	phenol	3

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D. Waste Toxicity

1. Chemical Name and/or RCRA Waste Code Number:

☒ ☐

phenol

2. Toxicity Value (circle one):

☒ ☐

0 1 2 3

Comments:

A discharge of phenol contaminated water
leaked from process tanks onto the floor
in Building 3.

ON-SITE ROUTE
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E. Targets

*1. Distance to Residential Areas

Determine the distance to the nearest residence (in miles).

Sources (circle): GIS; USGS; GEMS; Local Planning Department; Area Maps.
Comment and other source (date): _____

*2. On-Site Sensitive Environments

Yes, if there is a sensitive environment within facility boundaries or in areas with soil contamination due to facility operations; or No, if there is not a sensitive environment on-site. Sensitive environments include freshwater wetlands (greater than 2 acres), marshes, swamps, parks (national or state), and critical habitats of state and federal proposed and listed endangered species.

Sources (circle): GIS; State Department of Fisheries & Wildlife; USGS.
Comment and other source (date): Ref #7

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E. Targets

1. Distance to nearest residential area (miles): .01
2. Is there an on-site sensitive environment (circle one)?

☒ ☐

☒ ☐

Yes

No

Comments: